

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
18 September 2003 (18.09.2003)

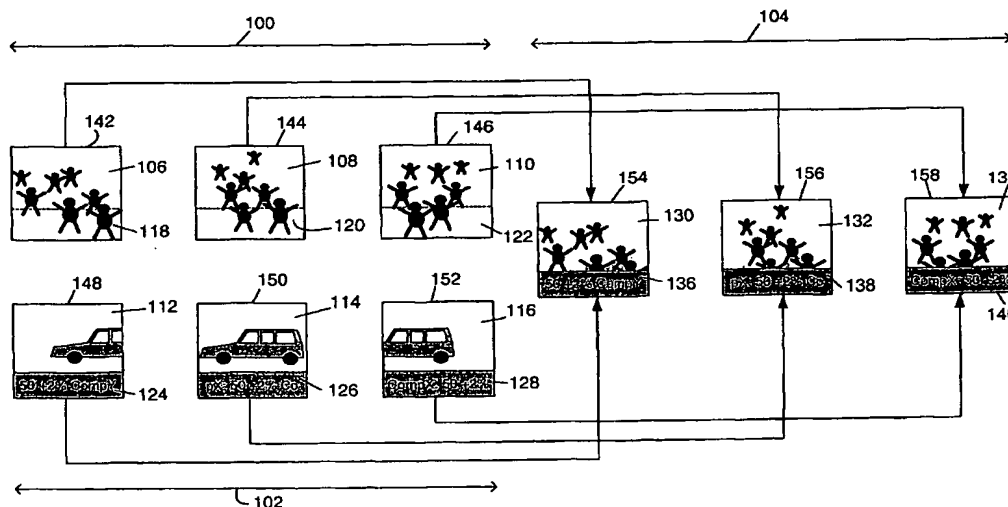
PCT

(10) International Publication Number
WO 03/077541 A1

- (51) International Patent Classification⁷: **H04N 5/445, 5/262**
- (21) International Application Number: **PCT/IB03/00511**
- (22) International Filing Date: **12 February 2003 (12.02.2003)**
- (25) Filing Language: **English**
- (26) Publication Language: **English**
- (30) Priority Data:
02076003.9 **11 March 2002 (11.03.2002)** **EP**
- (71) Applicant (for all designated States except US): **KONINKLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]**;
Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): **BAKER, Keith**
[GB/NL]; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).
- (74) Agent: **GROENENDAAL, Antonius, W., M.**; Internationaal Octrooibureau B.V., Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).
- (81) Designated States (national): **AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.**
- (84) Designated States (regional): **ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).**
- Published:**
— with international search report

[Continued on next page]

(54) Title: **IMAGE DISPLAY APPARATUS**



(57) Abstract: A image display apparatus (300) for displaying a third series (104) of consecutive output images (154-158) which are based on a first series (100) of consecutive input images (142-146) and a second series (102) of consecutive input images (148-152), is arranged to split the images of the first series (100) of consecutive input images (142-146) into first parts (106-110) and respective second parts (118-122); to split the images of the second series (102) of consecutive input images (148-152) into third parts (112-116) and respective fourth parts (124-128); and to display a first one (158) of the output images (154-158) comprising a first block of pixels (134) corresponding to a first one (110) of the first parts (106-110) and a second block of pixels (140) corresponding to a first one (128) of the fourth parts (124-128).

WO 03/077541 A1

BEST AVAILABLE COPY

WO 03/077541 A1



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

PCT/IB 03/00511

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 H04N5/445 H04N5/262

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 IPC 7 H04N G09G

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 657 095 A (YOSHIDA MASAYOSHI ET AL) 12 August 1997 (1997-08-12) column 2, line 52 -column 4, line 33; figures 2,4,5,7,8 ---	1-5,8,9
X	EP 0 766 463 A (TOKYO SHIBAURA ELECTRIC CO) 2 April 1997 (1997-04-02) column 7, line 48 -column 13, line 41; figures 6,7,13,14 ---	1,6,8
Y	US 6 208 386 B1 (TAMIR MICHAEL ET AL) 27 March 2001 (2001-03-27) abstract; figures 2-4,7 column 4, line 21-42 --- -/--	7

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- * & * document member of the same patent family

Date of the actual completion of the international search

14 May 2003

Date of mailing of the international search report

21/05/2003

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
 NL - 2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
 Fax: (+31-70) 340-3016

Authorized officer

Brandenburg, J

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 02 01886 A (VLS COM LTD ;SHERAIZIN SEMION M (IL); SHERAIZIN VITALY S (IL)) 3 January 2002 (2002-01-03) abstract; figures 1,2 page 11, line 1 -page 15, line 29 -----	7
A	US 6 310 657 B1 (GIANI MARIO ET AL) 30 October 2001 (2001-10-30) abstract; figures 1-3 -----	1-9

INTERNATIONAL SEARCH REPORT

PCT/18 03/00511

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5657095	A	12-08-1997	JP 6350937 A	22-12-1994
EP 0766463	A	02-04-1997	JP 9093548 A	04-04-1997
			CN 1152839 A , B	25-06-1997
			EP 0766463 A2	02-04-1997
			US 5734436 A	31-03-1998
US 6208386	B1	27-03-2001	GB 2305051 A	26-03-1997
			AT 191595 T	15-04-2000
			AT 200948 T	15-05-2001
			AU 695857 B2	27-08-1998
			AU 6935096 A	27-03-1997
			AU 714317 B2	06-01-2000
			AU 6935296 A	27-03-1997
			BR 9606626 A	30-09-1997
			BR 9610167 A	11-08-1998
			CA 2231374 A1	13-03-1997
			CA 2231376 A1	13-03-1997
			CN 1198865 A	11-11-1998
			CN 1199530 A	18-11-1998
			DE 69607631 D1	11-05-2000
			DE 69607631 T2	27-07-2000
			DE 69612666 D1	07-06-2001
			DE 69612666 T2	29-05-2002
			EP 1056281 A1	29-11-2000
			EP 0848883 A1	24-06-1998
			EP 0848884 A1	24-06-1998
			ES 2153125 T3	16-02-2001
			ES 2157456 T3	16-08-2001
			WO 9709822 A1	13-03-1997
			WO 9709823 A1	13-03-1997
			JP 11512263 T	19-10-1999
			JP 11514510 T	07-12-1999
			TR 9800395 T1	21-05-1998
			TR 9800396 T1	21-05-1998
			US 6292227 B1	18-09-2001
			US 6384871 B1	07-05-2002
WO 0201886	A	03-01-2002	AU 6780301 A	08-01-2002
			WO 0201886 A1	03-01-2002
US 6310657	B1	30-10-2001	US 6369855 B1	09-04-2002
			US 6263396 B1	17-07-2001
			US 6452641 B1	17-09-2002
			DE 69716376 D1	21-11-2002
			EP 0840276 A2	06-05-1998
			JP 10187126 A	14-07-1998
			EP 0840512 A2	06-05-1998
			EP 0840277 A2	06-05-1998
			JP 10177374 A	30-06-1998
			EP 0840505 A2	06-05-1998
			JP 10191383 A	21-07-1998
			DE 69715559 D1	24-10-2002
			EP 0840518 A2	06-05-1998
			JP 10210461 A	07-08-1998
			US 6226291 B1	01-05-2001
			EP 0840520 A2	06-05-1998
			US 6414726 B1	02-07-2002